

Claims

1 A process for a digital video recorder, comprising the steps of:
providing a plurality of input signal tuners;
5 wherein said tuners accept analog and digital television broadcast signals;
wherein each of said tuners is individually tuned to a specific broadcast
signal;
converting analog television broadcast signals into a digital signal;
separating a digital signal or digital television broadcast signal into its video
10 and audio components;
storing said video and audio components on a storage device;
providing a plurality of output devices;
wherein each output device extracts a specific video and audio component
from said storage device;
decoding each specific video and audio component into a television output
signal;
sending television output signals to at least one display device; and
wherein said decoding step allows playback rate and direction of each
television output signal to be controlled individually to perform variable rate fast
forward and rewind, frame step, pause, and play functions.

2 The process of Claim 1, wherein a user controls the playback rate and
direction of a television output signal through a remote control.

25 3. The process of Claim 1, further comprising the step of:
providing a multimedia recording device, wherein said decoding step sends
any of a specific video and audio component or a television output signal to said
multimedia recording device for recording.

30 4. The process of Claim 1, further comprising the step of:
inserting on-screen displays into a television output signal.

35 5. The process of Claim 1, further comprising the step of:
providing editing means for creating custom sequences of video and/or
audio output; and

wherein said editing means allows any number of video and/or audio segments to be lined up and combined and stored on said storage device.

5 6. The process of Claim 1, further comprising the step of:
providing means for synchronizing video and audio components for proper playback.

10 7. The process of Claim 1, wherein an input signal tuner receives any of:
software updates or data.

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10 A process for a digital video recorder, comprising the steps of:
receiving a plurality of television broadcast signals;
storing each television broadcast signal in a digital form on a storage device;
providing a plurality of output devices;
wherein each output device extracts a specific digital broadcast signal from
said storage device;
converting each specific digital broadcast signal into a television output
signal;
sending television output signals to at least one display device; and
wherein said converting step allows playback rate and direction of each
television output signal to be controlled individually to perform variable rate fast
forward and rewind, frame step, pause, and play functions.

20 8. The process of Claim 8, wherein a user controls the playback rate and
direction of a television output signal through a remote control.

Sub C7 10. The process of Claim 8, further comprising the step of:
providing a multimedia recording device, wherein said converting step
sends any of a specific digital broadcast signal or a television output signal to said
multimedia recording device for recording.

11. The process of Claim 8, further comprising the step of:
inserting on-screen displays into a television output signal.

35 12. The process of Claim 8, further comprising the step of:

providing editing means for creating custom sequences of video and/or audio output; and

wherein said editing means allows any number of video and/or audio segments of digital broadcast signals to be lined up and combined and stored on
5 said storage device.

~~13.~~ The process of Claim 8, wherein a television broadcast signal can contain any of: software updates or data.

~~Sub 14.~~ A process for a digital video recorder, comprising the steps of:
receiving a plurality of input streams;
storing said plurality of input streams in digital form on a storage device;
providing a plurality of output devices;
wherein each output device extracts a digital stream from said storage device;
decoding each digital stream into a television output signal;
sending television output signals to at least one display device; and
wherein said decoding step allows playback rate and direction of each television output signal to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

~~15.~~ The process of Claim 14, wherein a user controls the playback rate and direction of a television output signal through a remote control.

25 ~~16.~~ The process of Claim 14, further comprising the step of:
providing a multimedia recording device, wherein said decoding step sends any of a digital stream or a television output signal to said multimedia recording device for recording.

30 ~~17.~~ The process of Claim 14, further comprising the step of:
inserting on-screen displays into a television output signal.

~~18.~~ The process of Claim 14, further comprising the step of:
providing editing means for creating custom sequences of video and/or
35 audio output; and

wherein said editing means allows any number of video and/or audio segments of digital streams to be lined up and combined and stored on said storage device.

5 ~~19.~~ The process of Claim 14, wherein an input stream can contain any of: software updates or data.

~~Sub A~~ ~~20.~~ A process for a digital video recorder, comprising the steps of: storing a plurality of multimedia programs in digital form on a storage device; 10 playing back at least two of said multimedia programs from said storage device to at least one television monitor; and wherein said playing back step allows playback rate and direction of each multimedia program to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

15 ~~21.~~ The process of Claim 20, wherein said playing back step converts said at least two of said multimedia programs into television output signals;

20 ~~22.~~ The process of Claim 21, further comprising the step of: inserting on-screen displays into a television output signal.

~~23.~~ The process of Claim 20, wherein a user controls the playback rate and direction of a multimedia program through a remote control.

25 ~~24.~~ The process of Claim 20, further comprising the step of: providing a multimedia recording device, wherein said playing back step sends a multimedia program to said multimedia recording device, allowing a user to record said multimedia program.

30 ~~25.~~ The process of Claim 20, further comprising the step of: providing editing means for creating custom sequences of video and/or audio output; and wherein said editing means allows any number of video and/or audio segments of multimedia programs to be lined up and combined and stored on said storage device.

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26. The process of Claim 20, further comprising the steps of:
providing a plurality of input signal tuners;
wherein said tuners accept analog and digital multimedia program signals;
5 wherein each of said tuners is individually tuned to a specific multimedia
program;
converting analog multimedia programs into a digital representation; and
wherein said storing step separates a digitized analog multimedia program
or digital multimedia program into its video and audio components before storing
10 on said storage device.

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27. The process of Claim 26, further comprising the step of:
providing means for synchronizing video and audio components for proper
playback.

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28. The process of Claim 26, wherein an input signal tuner receives any of:
software updates or data.

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29. An apparatus for a digital-video recorder, comprising:
a plurality of input signal tuners;
wherein said tuners accept analog and digital television broadcast signals;
wherein each of said tuners is individually tuned to a specific broadcast
signal;
25 a module for converting analog television broadcast signals into a digital
signal;
a module for separating a digital signal or digital television broadcast signal
into its video and audio components;
a module for storing said video and audio components on a storage device;
a plurality of output devices;
30 wherein each output device extracts a specific video and audio component
from said storage device;
a module for decoding each specific video and audio component into a
television output signal; and
a module for sending television output signals to at least one display device;

wherein said decoding module allows playback rate and direction of each television output signal to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

5 ~~30.~~ The apparatus of Claim 29, wherein a user controls the playback rate and direction of a television output signal through a remote control.

~~31.~~ The apparatus of Claim 29, further comprising:

10 a multimedia recording device, wherein said decoding module sends any of a specific video and audio component or a television output signal to said multimedia recording device for recording.

32. The apparatus of Claim 29, further comprising:

a module for inserting on-screen displays into a television output signal.

~~33.~~ The apparatus of Claim 29, further comprising:

15 editing means for creating custom sequences of video and/or audio output; and

20 wherein said editing means allows any number of video and/or audio segments to be lined up and combined and stored on said storage device.

~~34.~~ The apparatus of Claim 29, further comprising:

means for synchronizing video and audio components for proper playback.

25 ~~35.~~ The apparatus of Claim 29, wherein an input signal tuner receives any of: software updates or data.

~~36.~~ An apparatus for a digital video recorder, comprising:

30 a module for receiving a plurality of television broadcast signals;

a module for storing each television broadcast signal in a digital form on a storage device;

a plurality of output devices;

wherein each output device extracts a specific digital broadcast signal from said storage device;

a module for converting each specific digital broadcast signal into a television output signal;

a module for sending television output signals to at least one display device; and

5 wherein said converting module allows playback rate and direction of each television output signal to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

~~37.~~ The apparatus of Claim 36, wherein a user controls the playback rate and direction of a television output signal through a remote control.

~~38.~~ The apparatus of Claim 36, further comprising:
a multimedia recording device, wherein said converting module sends any
of a specific digital broadcast signal or a television output signal to said multimedia
recording device for recording.

39. The apparatus of Claim 36, further comprising:
a module for inserting on-screen displays into a television output signal.

~~40.~~ The apparatus of Claim 36, further comprising:
editing means for creating custom sequences of video and/or audio output;
and

wherein said editing means allows any number of video and/or audio segments of digital broadcast signals to be lined up and combined and stored on said storage device.

~~41.~~ The apparatus of Claim 36, wherein a television broadcast signal can contain any of: software updates or data.

~~42.~~ An apparatus for a digital video recorder, comprising:
a module for receiving a plurality of input streams;
a module for storing said plurality of input streams in digital form on a storage device;
a plurality of output devices;

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wherein each output device extracts a digital stream from said storage device;
and
5 a module for decoding each digital stream into a television output signal;
a module for sending television output signals to at least one display device;
wherein said decoding module allows playback rate and direction of each television output signal to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

10 43. The apparatus of Claim 42, wherein a user controls the playback rate and direction of a television output signal through a remote control.

15 43. The apparatus of Claim 42, further comprising:
a multimedia recording device, wherein said decoding module sends any of a digital stream or a television output signal to said multimedia recording device for recording.

20 44. The apparatus of Claim 42, further comprising:
a module for inserting on-screen displays into a television output signal.

25 45. The apparatus of Claim 42, further comprising:
editing means for creating custom sequences of video and/or audio output;
and
wherein said editing means allows any number of video and/or audio segments of digital streams to be lined up and combined and stored on said storage device.

30 46. The apparatus of Claim 42, wherein an input stream can contain any of:
software updates or data.

SubClaim
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35 An apparatus for a digital video recorder, comprising:
a module for storing a plurality of multimedia programs in digital form on a storage device;
a module for playing back at least two of said multimedia programs from said storage device to at least one television monitor; and

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wherein said playing back module allows playback rate and direction of each multimedia program to be controlled individually to perform variable rate fast forward and rewind, frame step, pause, and play functions.

5 ~~49~~ 48. The apparatus of Claim ~~47~~, wherein said playing back step converts said at least two of said multimedia programs into television output signals;

~~50~~ 49. The apparatus of Claim ~~48~~, further comprising:
a module for inserting on-screen displays into a television output signal.

10 ~~51~~ 48. The apparatus of Claim ~~47~~, wherein a user controls the playback rate and direction of a multimedia program through a remote control.

~~52~~ 48. The apparatus of Claim ~~47~~, further comprising:
a multimedia recording device, wherein said playing back module sends a multimedia program to said multimedia recording device, allowing a user to record said multimedia program.

~~53~~ 48. The apparatus of Claim ~~47~~, further comprising:
editing means for creating custom sequences of video and/or audio output;
and

wherein said editing means allows any number of video and/or audio segments of multimedia programs to be lined up and combined and stored on said storage device.

25 ~~54~~ 48. The apparatus of Claim ~~47~~, further comprising:
~~55~~ a plurality of input signal tuners;
wherein said tuners accept analog and digital multimedia program signals;
wherein each of said tuners is individually tuned to a specific multimedia

30 program;
a module for converting analog multimedia programs into a digital representation; and

wherein said storing module separates a digitized analog multimedia program or digital multimedia program into its video and audio components before storing on said storage device.

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The apparatus of Claim 54, further comprising the step of:
means for synchronizing video and audio components for proper playback.

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The apparatus of Claim 54, wherein an input signal tuner receives any of:
software updates or data.

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